*"If you do not have a healthy mouth, you do not have health."*

C. Everett Koop, MD
Former Surgeon General
U.S. Public Health Service
1981-1989

*"We know the mouth reflects general health and well-being."*

David Satcher, MD, PhD
Surgeon General
U.S. Public Health Service
1998-2002

# RHODE ISLAND ORAL HEALTH STRATEGIC PLAN (2002-2006)

## VISION

All Rhode Islanders have the opportunity to live a safe and healthy life in a safe and healthy community with the assurance of attaining a robust quality of life.

## MISSION

To improve the oral health of all Rhode Islanders in the context of total health.

## NEED

Almost 12% of RI's 1,048,000 residents live at or below 100% of the federal poverty level; while 29% fall below the 200% of poverty mark.[1] In 1990, about one in 10 Rhode Islanders was a racial or ethnic minority; in 2000, minorities were nearly one in five, with minorities outnumbering non-Hispanic whites in two urban communities (Providence; Central Falls). The Behavioral Risk Factor Surveillance Survey (BRFSS) reports that those of minority race/ethnicity are especially likely to be uninsured. About 9.6% of minorities are unemployed.[2]

Since its inception in 1994, RIte Care, the state's Medicaid program, has enrolled 154,000 people.[3] Low family income, low educational attainment, lack of transportation, and language/cultural differences as well as the dearth of dentists participating in Medicaid pose real barriers to using oral health care services.
RI's low-income and culturally diverse individuals/families, many of whom have limited knowledge of preventive oral health practices and/or limited experience with dental treatment, face significant disparities in oral disease and disorders. Few of RI children [#<18years=225,000; #<6years=75,000; #<100% FPL=30,000][4], have escaped the consequences of oral disease. The following rates of disease are occurring despite extensive optimally fluoridated community water supplies:

- In 1998, 35% of elementary school children in 10 inner city schools had urgent/emergent dental needs and no regular source of dental care.[5]
- Access to dental care was one of the top 10 needs reported by caregivers for children with special needs enrolled in the fee-for-service Medicaid.[6]
- In 1996, only 28% of RIte Care enrolled children <14 years old had received dental sealants.[7]

Early childhood caries (ECC), with its enormous social and economic costs is of particular importance. Like far too many other conditions, ECC is not distributed evenly throughout the population; children from families with low incomes and some racial/ethnic minorities are estimated to be affected at higher rates.[8, 9] A 1999 study found that 3% of children < 5 years lost a tooth due to causes other than trauma.[10] With cohorts of 12,500 births/year,[11] and assuming a moderate prevalence of 6%, ECC can be conservatively estimated to affect 2,600 Rhode Island children 6-48 months of age. ECC is a major problem in Rhode Island given that children most at-risk for ECC are likely to be of minority race/ethnicity and/or from families with low-income;

that these groups typically experience more oral disease and less access to care than the general population; and that only 10 pediatric dentists practice in the state.[12,13]

Oral and pharyngeal cancers represent another serious problem in Rhode Island. From 1987 to 1998, an average of 112 Rhode Islanders were diagnosed with invasive oral cancer annually, and an average of 37 Rhode Islanders died of oral cancer each year.[14] Recent age-adjusted oral cancer rates (incidence and mortality) have been higher in Rhode Island than in the U.S. as a whole for both genders. Especially troubling are the disparities based on race and socio-demographics associated with these cancers; the five-year survival rate is lower among African Americans [34%] than whites [56%];[15,] only 19% of African Americans had their cancer detected at the earliest stage, compared with 38% of whites;[16] and only 7% of African Americans aged 40 and older had received an oral cancer exam in the past 12 months compared with 14% of Whites receiving this benefit.[17] A 1996 Rhode Island study found oral cancer screening rates of adults to be less than optimal: 30% of ages 18-24, 35% of ages 25-59, and 32% of adults ages 60+ reported receiving an oral cancer examination in the last year.[18]

A report indicating sports participation accounts for 36% of all unintentional injuries to children and adolescents[19] gives an indication of the potential magnitude of childhood sports-related oro-facial injuries. Chipped incisors/avulsed incisors are the most common sports related oro-facial injuries, but 31% of all mandibular fractures and 10% of all maxillofacial fractures are sports-related. With an estimated 24,400 youngsters (boys = 14,200, girls = 10,200) participating in organized Rhode Island Interscholastic League (RIIL) sports programs,[20] and assuming an injury rate of 13.1 injuries/100 boys/season and 5.9 injuries/100 girls/season,[21] one can conservatively estimate 2,400 injuries in RIIL sponsored programs.

Community water fluoridation is an ideal public health measure; it is safe [56 years of controlled monitored study with virtually no untoward occurrences], clinically effective [reduces dental decay an average of 25% annually for children and adults[22]], cost effective [≈ $1.00/person/year for capital and operating expenses;[23] every $1.00 invested saves an average of $38.00 in future dental treatment costs[24]], equitable [the entire population benefits regardless of personal financial resources], accessible [requires no effort on the part of the population], and does not depend upon access to oral health professionals. The optimal level of fluoride in Rhode Island drinking water, considering clinical effectiveness and potential side effects, is one part per million or one milligram of fluoride dissolved in one liter of water. Rhode Islanders are particularly fortunate to benefit from community water fluoridation: 80% of the total population and 89% of the population served by community water systems receive the benefits of fluoride.[25] The major non-fluoridated community water systems are located in Washington County (Narragansett, North Kingstown, South Kingstown, and Westerly).[26]

The decreasing supply of dentists nationally coupled with an aging dentist workforce in RI [60% <50 years; 26%=51-60 years; 9%=61-70 years; 4%=71-80 years; 1%>81 years] and the lack of an in-state dental school suggests an absolute dentist shortage in RI in the near future.[27,28] Of particular concern is the fact that there are only 10 pediatric dentists in RI, with just one new pediatric dentist joining a private practice in RI in the last 10 years. Dental hygienists and dental assistants appear to be in short supply as well, thereby intensifying the access barrier. This problem is particularly severe in Providence and has serious implications for low-income, underserved populations.

## GOALS

### I. EARLY CHILDHOOD CARIES

**To reduce the incidence of early childhood caries in children ages 6-48 months; to increase the provision of treatment services to children ages 6-48 months with early childhood caries.**

A. Education/Health Promotion/Disease Prevention Services

1. Public education activity targeting future parents, current parents, and caregivers re: oral health consequences of bedtime bottle feeding, transition from bottle to cup at 6-12 months of age, healthful feeding practices, fluoride supplements as appropriate, oral hygiene, early identification of disease, and a visit to the dentist by 12 months of age.
    a. PSAs, media, billboards, marketing, hotline.
2. Professional education activity targeting primary care health providers (pediatricians, internists, family physicians, obstetricians, nurse practitioners, nurse mid-wives, physician assistants, and WIC nutritionists) re: anticipatory guidance, early identification of disease, fluoride supplements as appropriate, healthful feeding practices, snacking behaviors that promote good oral health, and referral to the dentist by 12 months of age.
    a. Training meetings.
3. Professional education activity targeting the practicing dental community (particularly general practice dentists and dental hygienists) re: appropriate clinical management of very young patients, new therapeutic modalities, and clinical treatment of non-complex cases.
    a. Training meetings.

B. Treatment Services

1. Commitment from practicing dental community to address early childhood caries as a priority.
2. Commitment from commercial dental insurers to incentivize reimbursement for specific early childhood caries services provided to children ages 6-48 months.
3. Commitment from Rhode Island Medicaid program to incentivize reimbursement for specific early childhood caries services provided to children ages 6-48 months.

### II. ORAL & PHARYNGEAL CANCER

**To increase the percent of adults receiving an oral cancer examination; to increase the number of oral and pharyngeal cancers diagnosed at an early stage (Stage I, II) and referred for treatment.**

A. Education/Health Promotion/Disease Prevention Services

1. Public education activity targeting adults re: risk factors, signs/symptoms of disease, oral health consequences, annual visit to the dentist, and examination for early identification of disease.
    a. PSAs, media, billboards, marketing, hotline.
2. Professional education activity targeting primary care health providers (internists, family physicians, obstetricians, and nurse practitioners, physician assistants practitioners) re: risk factors, signs/symptoms of disease, oral health consequences, examination for early identification of disease, and referral for diagnosis and treatment.
    a. Training meetings.

3. Professional education activity targeting the practicing dental community (particularly general practice dentists and dental hygienists) re: risk factors, signs/symptoms of disease, oral health consequences, performance of clinical examination for early identification of disease, and referral for diagnosis and treatment.
    a. Training meetings.

B. Treatment Services
1. Commitment from practicing dental community to address oral cancer examination as a priority.
2. Commitment from commercial dental insurers to incentivize reimbursement for oral cancer examination services provided to adult patients.
3. Commitment from Rhode Island Medicaid program to incentivize reimbursement for oral cancer examination services provided to adult patients.

## III. CHILDHOOD SPORTS-RELATED ORO-FACIAL INJURIES

**To increase the use of mouthguards in school sponsored contact sports programs; to reduce the number of sports-related unintentional childhood oro-facial injuries; to facilitate the mandatory use of mouthguards in school sponsored contact sports.**

A. Education/Health Promotion/Disease Prevention Services
1. Public education activity targeting current parents, children ages 5-18 years, and caregivers re: risks of oro-facial injury during contact sports, oro-facial protection with mouthguard use.
    a. PSAs, media, billboards, marketing, hotline.
2. Professional education activity targeting primary care health providers (pediatricians, internists, family physicians, nurse practitioners, and physician assistants) re: anticipatory guidance, risks of oro-facial injury during contact sports, oro-facial protection with mouthguard use, and referral to the dentist for mouthguard fabrication.
    a. Training meetings.
3. Professional education activity targeting the practicing dental community [particularly general practice dentists and dental hygienists] re: mouthguard fabrication.
    a. Training meetings.
4. Professional education activity targeting state/local elected re: risks of oro-facial injury during contact sports and oro-facial protection with mouthguard use.
    a. Training meetings.
5. Professional education activity targeting school district officials re: risks of oro-facial injury during contact sports and oro-facial protection with mouthguard use.
    b. Training meetings.

B. Treatment Services
1. Commitment from practicing dental community to address sports-related unintentional childhood oro-facial injuries as a priority.
2. Commitment from commercial dental insurers to incentivize reimbursement for mouthguard construction services provided to children ages 5-18 years.
3. Commitment from Rhode Island Medicaid program to incentivize reimbursement for mouthguard construction services provided to children ages 5-18 years.

## IV. COMMUNITY WATER FLUORIDATION

**To increase the percent of Rhode Islanders receiving the benefits of community systems providing fluoridated drinking water.**

A. Education/Health Promotion/Disease Prevention Services
   1. Public education activity targeting the entire population re: life-long benefits of community water fluoridation.
      a. PSAs, media, billboards, marketing, hotline.
   2. Professional education activity targeting state/local elected officials re: life-long benefits of community water fluoridation.
      a. Training meetings.
   3. Professional education activity targeting water plant operators re: life-long benefits of community water fluoridation and engineering aspects of water fluoridation.
      a. Training meetings.

B. Community Assistance
   1. Commitment from practicing dental community to support community water fluoridation as a priority in Narragansett, North Kingstown, South Kingstown, and Westerly.
   2. Commitment from state/local elected officials to support community water fluoridation as a priority in Narragansett, North Kingstown, South Kingstown, and Westerly.
   3. Commitment from water plant operators to support community water fluoridation as a priority in Narragansett, North Kingstown, South Kingstown, and Westerly.

## V. WORKFORCE

**To increase the oral health workforce in Rhode Island.**

A. Education Services
   1. Professional education activity targeting state elected officials re: oral health workforce issues in Rhode Island.
      a. Training meetings.

B. Policy Development
   1. Support a Board of Examiners in Dentistry policy change to provide for dentist and dental hygienist licensure by full endorsement/credentials. [Exception: dentists and dental hygienists who have been out of practice for the previous five years.]
   2. Support academic oral health training programs to meet the manpower needs of Rhode Island.
   3. Support a three-tier system of dentist practice incentives to recruit six dentists per year to practice in Rhode Island; eligibility should be limited to initial Rhode Island licensed general practice dentists and pediatric dentists, with priority given to board eligible/certified pediatric dentists. Given an objective of maximum administrative efficiency and minimal burden, agreements would be contractual in nature, paid at end of a completed full year, and require appropriate documentation of private practice operation and Medicaid billing volume.
      a. $15,000/yr incentive for initial Rhode Island licensed dentists (2) to establish a private practice anywhere in the state. Maximum commitment of three years ($45,000) per dentist.
      b. $25,000/yr incentive for initial Rhode Island licensed dentists (2) to establish a private practice anywhere in the state + participate as a significant Medicaid provider (defined as >$25,000 Medicaid billings/yr). Maximum commitment of three years ($75,000) per dentist.

c. $35,000/year loan repayment earmarked for initial Rhode Island licensed dentists (2) to practice at safety-net sites in designated dental health professional shortage areas. Maximum commitment of three years ($105,000) per dentist. [Note: This is a modification of the existing state loan repayment program and may require a statutory change; currently dentists compete with other health professionals.]

## VI. ACCESS/FINANCING

**To assure effective quality oral health services are available and accessible.**

A. Assist and support Department of Human Services efforts to strengthen the Rite Care (Medicaid) dental services program.
   1. Establish and maintain dialogue with Department of Human Services dental program staff.
   2. Provide technical assistance as requested.

B. Provide training and technical assistance to safety-net dental programs to assure the delivery of culturally appropriate effective quality oral health services to underserved populations.
   1. Provide a quality of care evaluation of safety-net dental programs as requested.
   2. Provide issue-specific training and technical assistance to safety-net dental programs as requested.

## VII. INFRASTRUCTURE/CAPACITY

**To develop, strengthen and maintain the essential elements of core public health functions (assessment, policy development, assurance) that support infrastructure and capacity for the oral health program.**

A. State-based Oral Health Surveillance System
   1. Establish and maintain an enhanced oral health surveillance system to monitor oral disease status, determine trends, and identify disparities in Rhode Island.

B. Leadership
   1. Establish an administrative structure with appropriate leadership and adequate staffing to support an oral health program with necessary competencies to address the oral health of Rhode Islanders.

C. State Oral Health Improvement Plan
   1. Develop and maintain a state oral health improvement plan to select strategies, establish interventions, and set priorities.

D. Policies
   1. Develop, promote, and review policies to effect improved oral health for Rhode Islanders.

E. Communications and Education
   1. Develop and implement an oral health communications and education activity to increase the awareness of oral health issues by policy makers and the public.

F. Linkages
   1. Establish linkages with stakeholders/partners interested in improving the oral health of Rhode Islanders.

G. Community Capacity
   1. Build community capacity to implement community-based interventions.

H. Health Systems Interventions
   1. Develop health systems interventions that facilitate quality dental services for Rhode Islanders.

I. Resources
   1. Leverage resources to fund the oral health program.

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